

Abstract

The present development is a catalyst for use in the water-gas-shift reaction. The catalyst includes a Group VIII or Group IB metal, a transition metal promoter selected from the group consisting of rhenium, niobium, silver, manganese, vanadium, molybdenum, titanium, tungsten and a combination thereof, and a ceria-based support. The support may further include gadolinium, samarium, zirconium, lithium, cesium, lanthanum, praseodymium, manganese, titanium, tungsten, neodymium or a combination thereof. A process for preparing the catalyst is also presented. In a preferred embodiment, the process involves providing “clean” precursors as starting materials in the catalyst preparation.